Department of
Environmental Protection
Bureau of Land & Water Quality Oct. 2001

O&M Newsletter

A monthly newsletter for wastewater discharge licensees, treatment facility operators and associated persons

Electronic Copies of the O&M news

As many of you may know, we post every issue of the O&M news on the DEP Web site at http://www.state.me.us/dep/blwq/newslet/omnews.pdf We are also considering the possibility of developing an e-mail list and sending copies of the newsletter out as e-mail attachments. We would like some feedback from the readers of the O&M news about this possibility. If you have e-mail and would like to receive the O&M News electronically instead of in the mail, please send an e-mail to:
dick.darling@state.me.us
We will build an e-mail group and start sending your O&M News electronically.

Fall 2001 Exam

The fall 2001 Wastewater Operator Certification Exam will be given Wednesday -- November 14, 2000 in the usual locations, South Portland, Bangor and Presque Isle. If you submitted an application, you should be receiving the confirmation letter soon. If you have not submitted your application by now, you will have to wait until the May, 2002 exam.

Applications can be obtained by contacting Leslie Rucker at 287-9031 or by writing to Wastewater Operator Certification Program, Maine Department of Environmental Protection, 17 State House Station, Augusta, ME 04333-0017.

UPCOMING TRAINING COURSES

October 11, 2001 in Norway, ME – Cross Connection Control - sponsored by MRWA, (207) 729-6569 - Approved for 3.5 hours.
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Oct 16, 2001 in Bangor, ME - Applying Process Control Tests to WWTP Operations – sponsored by JETCC, (207) 767-2649 – Approved for 6 hours
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Oct 15, 2001 in Presque Isle, ME – Wastewater Operator Certification Review – Grades I, II & III – sponsored by Maine Rural Water Association, (207) 729-6569– Approved for 6 hours
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Oct 16, 2001 in Presque Isle, ME – Wastewater Operator Certification Review – Grades IV & V – sponsored by Maine Rural Water Association, (207) 729-6569– Approved for 5 hours
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Oct 18, 2001 in Mexico, ME – Safety & Health Programming in the Utilities Industry – sponsored by Maine Rural Water Association, (207) 729-6569– Approved for 4 hours

Oct 23 & 30, 2001 in Kittery, ME – Wastewater Microbiology and Filament Staining & Identification – sponsored by Maine Rural Water Association, (207) 729-6569– Approved for 8 hours
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Oct 23 & 24, 2001 in Portland, ME - Basic Wastewater Treatment w/ Applied Math– sponsored by NEIWPCC/JETCC, (207) 767-2649 – Approved for 6 hours
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October 30, 2001 in Houlton, ME – Cross Connection Control - sponsored by MRWA, (207) 729-6569 - Approved for 3.5 hours.
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Oct 30, 2001 in Brewer, ME - Physical/Chemical Treatment in WWTF– sponsored by JETCC, (207) 767-2649 – Approved for 6 hours
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Oct. 31, 2001 in Presque Isle, ME - Pump Station Control Panel Seminar– sponsored by JETCC, (207) 767-2649 – Approved for 6 hours
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Nov 5, 2001 in Augusta, ME – Wastewater Operator Certification Review – Grades I, II & III – sponsored by Maine Rural Water Association, (207) 729-6569– Approved for 6 hours
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Nov 6, 2001 in Augusta, ME – Wastewater Operator Certification Review – Grades IV & V – sponsored by Maine Rural Water Association, (207) 729-6569– Approved for 5 hours
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Nov 7, 2001 in Augusta, ME - Basic Chemistry– sponsored by JETCC, (207) 767-2649 – Approved for 6 hours
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Nov 8, 2001 in Freeport, ME – Safety & Health Programming in the Utilities Industry – sponsored by Maine Rural Water Association, (207) 729-6569– Approved for 4 hours

Nov 28, 2001 in Presque Isle, ME - Intro to Microsoft Office 2000– sponsored by JETCC, (207) 767-2649 – Approved for 6 hours
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Nov 27, 2001 in Waterville, ME - Emerging Wet Weather Flow Issues– sponsored by NEIWPCC/JETCC, (207) 767-2649 – Approved for 6 hours
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Dec 4, 2001 – in Lincoln, ME - Basic Excel Spreadsheets with Tips for Using your e-mail Effectively – sponsored by JETCC, (207) 767-2649 – Approved for 6 hours
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Dec 6, 2001 – in Waterville, ME - Emerging Wet Weather Flow Issues – sponsored by NEIWPCC/JETCC, (207) 767-2649 – Approved for 6 hours
*****

Dec 11, 2001 in Kittery, ME - Computer Databases for the Intermediate User– sponsored by JETCC, (207) 767-2649 – Approved for 6 hours

For Practice

1. What could cause anoxic conditions in your secondary clarifier?
   a. Sludge draw-off line open all the time.
   b. RAS rate too high.
   c. RAS rate too low.
   d. Secondary clarifiers cleaned too frequently.

2. If you normally pump 1800 gallons of 4% sludge from a gravity thickener to your belt filter press, how many gallons will you have to pump to remove the same amount of solids if the concentration increases to 6% solids?
   a. 500 gallons
   b. 1,000 gallons
   c. 1,200 gallons
   d. 1,500 gallons

3. One variation of the Activated Sludge Secondary Treatment Process is:
   a. Sequencing Batch Reactor
   b. Trickling Filter
   c. Imhoff Tank
   d. Rotating Biological Contactors

4. To make sure that your pH meter is working correctly, you should do the following on a frequent basis
   a. Calibrate the pH meter with laboratory standard solutions
   b. Change the electrode membranes
   c. Replace the electrode
   d. Remove the electrodes and store them in a sample jar

Dick Darling

Mercury Update

"On October 1, 2001 revisions to Chapter 519: Interim Effluent Limitations and Controls for the Discharge of Mercury were filed with the Secretary of State's office concerning the sunset provision of the original Chapter. Originally passed in February 2000, Chapter 519 establishes procedures for setting interim effluent limits and controls for the discharge of Mercury to surface waters of the state. As originally passed, Chapter 519 was set to expire on October 1, 2001. A change in the law enacted by the 120th Legislature carries forward the need for interim control on Mercury discharges beyond October 1, 2001. Consistent with the new law, amendments to Chapter 519 removed the expiration date from the rule. For more information contact Dennis Merrill at DEP in Augusta, phone# (207) 287-7788."

Dennis Merrill

Answers to *For Practice:*

1. c If the return sludge rate is too low, the sludge can stay in the secondary clarifier long enough for the microorganisms to use up any free dissolved oxygen. Some facultative bacteria will then start to convert the oxygen in nitrates, phosphates and sulfates. This can cause the sludge to rise and, if sulfates are reduced, severe odor problems.
2. c [(1800 gallons)(0.04)(8.34)]/ [(0.06)(8.34)]=1,200 gallons
3. a A Sequencing Batch Reactor completes all the same treatment processes as a conventional activated sludge system in a single treatment tank rather than in a combination of aeration tank and clarifier. Trickling filters and Rotating Biological Contactors are fixed film treatment systems. Imhoff tanks are primary treatment systems.
4. a The pH probe and meter should be checked against laboratory standards that bracket the normal pH range that the meter is expected to measure. For example, a meter that is used for normal influent and effluent measurements can be calibrated with standard solutions having pH of 4 and 10 since virtually all of the measurements will be within that range. However, a pH probe and meter used to check if sludge had been maintained at a pH of 12 or more for 72 hours to meet pathogen reduction requirements, the probe and meter should be calibrated against standards having pH of 10 and 14.